

## Draft Framework for Decision Tree and Initial Operating NC

### Background

Over the past decades, there has been considerable disagreement over the causes and the relative importance of various factors contributing to the decline of many Delta species. federal agencies engaged in developing the BDCP. These differences of opinion, and they are united in agreement that much additional insight can be gained through a more significant investment in applied science in the Delta.

It is not possible today to predict with high degrees of confidence what will be relating to the Bay Delta ecosystem and its species that will be available prior to the conditions affecting species at the time of initial operations. Notwithstanding this uncertainty, the initial operating condition, in combination with other conservation measures, designed to achieve the goals and objectives of the BDCP, contribute to the recovery of covered species based on the best information available. These biological outcomes, the BDCP program will do so in a manner which preserves the co

Therefore, the BDCP project, at its outset, utilizes a approach to address issues regarding the feasibility of operating criteria with certain discrete considerations, with other conservation measures to contribute to the recovery of covered species and reliability through a structured, scientifically driven process. This will be done by identification of a complete set of operating criteria prior to commencement of system, taking into consideration the performance of the "early implementation" other relevant factors.

Thereafter, the adaptive management program (to be described in revised control adjustments in the BDCP program. This adaptive management program will be the BDCP program. This adaptive management program will be the habitat program resulting from the conclusions of the Decision Tree process. The program will also apply continued adjustments in operating criteria as changes to the other conservation measures, etc.

The Decision Tree process will involve (1) defining initial, primary conceptual models capturing uncertainties leading to proposed for each targeted operating criteria and objectives of the BDCP; (2) develop implementation plan and data collection program to reduce of uncertainties; (3) update assessment efficiency of possible new BDCP conservation measures to achieve the goals and objectives identified in the expanded operating criteria that correspond to the potential outcomes that may result from test

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4 RED FLAG: This document creates unnecessary confusion by bifurcating adaptive mgmt decisions into before and after a new facility, muddying the exact nature of versus modified operating criteria among other things. We strongly suggest an alternative approach: (1) retain default operating criteria based on the best available science permitting, which will go into effect absent definitive findings by the permitting agencies; modifying these criteria will better match Plan's biological objective 2 (identify a range below and above the default criteria) within modifications to be made; (2) identify key uncertainties that affect potential modification with in that range (not uncertainties to offset the flow manipulations); the whole this document seems to be inappropriately bifurcated uncertainties as to how the flow manipulations made (most effective) to create a set of trees articulating hypotheses to be tested, results will be evaluated, and specific triggers for action to modify or not modify the default criteria; (3) distinguish between modifications based on decision tree adaptive management before or after operation (because such is unlikely that hypotheses will be definitely tested and resolved management process creates false expectations when resolution will be reached).

which will contribute in a manner that best aligns with the biological DCP.

detail remains to be worked out regarding the structure of the Decision Trees, including the hypotheses to be evaluated and the specifics of the decision-making process and the addition, the structure of the science program and general governance of BDCP are critically linked to the Decision Tree process.

## Guiding Principles

- The BDCP in its totality will be designed to achieve the biological DCP over the term of the permit. Existing permits and the proposed Conservation Measure 1 (CM1) combination the current conservation measures and other elements of the BDCP will give the biological goals and objectives BDCP over the term of the permit.
- CM1 will propose a complete set of operating criteria for the new CM1 will also identify discrete subset of these initial range of uncertainties (e.g. fall X2; spring outflows; etc.) which will be subject to Decision Tree process, described below. For each of these specific range that will be subject to environmental uncertainty, and these ranges will be included in the final permit authorization as possible outcomes of the should be the science developed hypotheses demonstrated an alternative that is protective of species of concern and designated critical habitat as the operating criteria.
- At the time of permit issuance and at the outset of the Decision criteria prescribing initial project operations in the same standards based on current scientific understanding will also identify specified range of of the discrete operating parameters where uncertainty has been identified CVP operations (e.g., spring outflow, entrainment, etc), with the range adjustments that might be made if uncertainties are resolved as predictive hypotheses. A targeted collaborative joint science program will be implemented the information needed to execute the Decision Tree process through the permit issuance and completion of construction of a delta conveyance process will be open and transparent in improved understanding that will provide the basis for reevaluating the operating the subject of the decision tree.
- The outcome of the Decision Tree process therefore, management of the decisions for the operating regime that will have been the subject of the This will occur prior to the commencing of operations for the new planning purposes, parties anticipate final management decision within the range framed at the time of permit issuance.

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 RED FLAG: It should also state clearly that biological objective included in permit terms and conditions is to implementation of specific conservation measures as well as implementation of the program totality, per earlier guidance from permitting agencies.

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 RED FLAG: Labeling these flow requirements as "significant uncertainties" and identifying them as the only actions the Decision Tree is fundamentally flawed there are disagreements between the fishery agencies and DWR/water exporters over the specifics of these flows. The agencies have determined the Fall X2 and South Delta requirements based on the best available science and the agencies have also determined additional spring outflows are required based on available science. Using vague language have significant repercussions. Using clear language documents should more narrowly focus (1) how to make flows and most effective over time, (2) whether complementary measures can be shown over time to achieve flows in achieving biological goals and forums.

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 RED FLAG: The selection of three operational parameters above and language here suggests that the Decision Tree is a ratchet that will only result in reduced exports, rather than potentially resulting in reduced exports substantially AF and increased flows. The document should explicitly acknowledge that these adjustments up or down from the default operations.

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 RED FLAG: This statement is consistent with legal requirements, but other language in this document suggests permitting a range, permitting alternative sets of operations, having default operations, is not consistent with requirements of law.

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 Either the Decision Tree document or the governance document must clearly state decision-makers' decision-making process that will be used in making management decisions.

conjunction with the ~~management decisions~~ define the full suite of operating criteria for the new dual conveyance system.

- Following the completion of the Decision Tree process for determining initial operating criteria for the project, the adaptive management program will then govern adjustments to all components of the BDCP program over the course of its implementation from that point forward.
- The ultimately selected operating criteria will meet ESA performance standards determined by the regulatory agencies by current understanding at that time.

## Preliminary Thoughts on Project Evaluation

- To facilitate timely completion of the BDCP planning process, the BDCP Effects Analysis will begin with using the operational criteria from the alternative that modeled and analyzed. Effects Analysis of alternative versions of analyses to address areas of scientific uncertainty. The BDCP effects analysis will also evaluate values around each of the individual criteria with the decision tree and evaluate those ranges. Acknowledging and embracing competing analytical approaches is an essential feature of the process, as it provides a basis for future investigations to address uncertainty.
- The operational criteria in the Effects Analysis are not intended to represent the most likely criteria analyzed; potentially be selected as the operating criteria for the SWP, and do not represent the most likely outcome. There is no "most likely" outcome."
- For the purpose of complying with ESA performance standards, the Effects Analysis must demonstrate that the operational parameters addressed through the Decision Tree process combination with implementation of all BDCP conservation measures meets a "contribution to recovery" standard, within the framework today.
- The Decision Tree will provide information for each discipline operational criteria that will meet that standard in combination with the criteria and implementation of all the BDCP conservation measures, based on scientific understanding at that time, and will reflect the new operational criteria for commencement of the new conveyance operations.
- The operations scenario ultimately chosen as the actual initial operating shown by currently available science to most efficiently achieve objectives and contribute to the recovery of covered species.

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## Next Step

- Discussion, modification, and agreement on basic framework.
- Agreement on list of the key operating criteria that will be subject to the Decision Tree process (e.g. Fall X2; spring flow criteria; and south Delta River operating criteria).
- Agreement on uncertainties and hypotheses that should be addressed by decision trees.
- **Agreement on the analytical approach utilized in evaluating the initial operating criteria and the ranges that are encompassed within it for the key operating criteria.** 4 / 7b 8  
□ □ □ 4 □ □ □ RED FLAG: The agencies can avoid making a determination of what constitutes the available scientific methodology/analytical approach; if there cannot be multiple analytical approaches.
- ICF begins revisions to Effects Analysis. Concurrently, work continues on analytical methodologies.

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